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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,918	09/26/2003	William G. McCollom	10021231-1	9165

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

BATES, KEVIN T

ART UNIT	PAPER NUMBER
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2155

MAIL DATE	DELIVERY MODE
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05/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/672,918

Applicant(s)

MCCOLLOM ET AL.

Examiner

Kevin Bates

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10-27-03, 12-27-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to a communication received on September 26, 2003.

The Information Disclosure Statements received October 27, 2003 and December 27, 2004 have been considered.

The Declaration has been received on January 13, 2004.

Claims 1-30 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldonado et. al. (2002/0075813).

Regarding claim 1, Baldonado teaches a system comprising: a content provider communicatively coupled to a plurality of service providers that provide access to a communication network (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *also* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)); and

an egress traffic manager operable to determine, based at least in part on traffic volume of each of the plurality of service providers (Paragraph 29), an optimal balance

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of the content provider's egress traffic to be routed to each of the plurality of service providers (Paragraph 19 –20).

Regarding claim 12, Baldonado teaches a method comprising: using a plurality of service providers for providing a content provider access to a communication network, wherein the content provider communicates its egress traffic to clients via the plurality of service providers (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *a/so* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs));

collecting traffic volume data for each service provider (Paragraph 127); and

determining, based at least in part on the collected traffic volume data, whether to change an allocation of egress traffic from the content provider among the plurality of service providers (Paragraph 20).

Regarding claim 21, Baldonado teaches an egress traffic manager (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *a/so* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)) comprising: means for determining, for each interface from a content provider to a plurality of service providers, outbound volume destined for each of a plurality of different Internet Protocol (IP) prefixes (Paragraph 29); and

means for determining, based at least in part on the outbound volume destined for each IP prefix, whether to reallocate an amount of the outbound traffic from the content provider among the plurality of service providers (Paragraph 20).

Regarding claim 25, Baldonado teaches an egress traffic manager (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *a/so* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)) comprising: at least one data collector module for collecting data reflecting volume of egress traffic routed by at least one router from a content provider to each of a plurality of service providers that provide access to a communication network (Paragraph 29); and a decision maker module for determining, based at least in part on the collected data, whether a routing strategy of the at least one router should be updated to change the allocation of the egress traffic among the plurality of service providers (Paragraph 20).

Regarding claim 29, Baldonado teaches a method comprising: implementing at least one content provider router for routing egress traffic from a content provider, said at least one content provider router having at least one interface to each of a plurality of service providers that provide the content provider access to a communication network (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *a/so* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)), wherein said at least one content provider router includes a routing table from which it determines which of the plurality of service providers to route the content provider's egress traffic (Paragraph 33, where the router is a BGP router and the updates are propagated to each edge router);

monitoring the volume of egress traffic directed from the at least one content provider router to each of the plurality of service providers (Paragraph 20);

determining whether the volume of egress traffic from said at least one content provider router to any one of the plurality of service providers exceeds a corresponding threshold (Paragraph 104); and

if determined that the volume of egress traffic to one of the plurality of service providers exceeds its corresponding threshold, updating the routing table of said at least content provider router to reallocate the content provider's egress traffic between the plurality of service providers (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel).

Regarding claim 2, Baldonado teaches the system of claim 1 further comprises: at least one router for routing the content provider's egress traffic to the plurality of service providers (Paragraph 18; Figure 1, element 102).

Regarding claim 3, Baldonado teaches the system of claim 2 wherein said at least one router comprises a border gateway protocol (BGP) router (Paragraph 19).

Regarding claim 4, Baldonado teaches the system of claim 2 wherein the egress traffic manager is operable to update the at least one router to achieve said optimal balance (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel).

Regarding claim 5, Baldonado teaches the system of claim 4 wherein the egress traffic manager is operable to update a routing table of the at least one router (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel and the update effects the router's next hop).

Regarding claim 6, Baldonado teaches the system of claim 1 wherein the egress traffic manager comprises: at least one data collector module operable to collect data reflecting said traffic volume (Paragraph 61).

Regarding claim 7, Baldonado teaches the system of claim 1 wherein the egress traffic manager comprises: router interface utilization data collector module operable to collect data reflecting traffic volume for each router interface from the content provider to the plurality of service providers (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 8, Baldonado teaches the system of claim 1 wherein the egress traffic manager comprises: per prefix utilization data collector module operable to collect data reflecting traffic volume for each prefix to which said egress traffic is destined (Paragraph 85, where the second pass analyzes the performance of each prefix).

Regarding claim 9, Baldonado teaches the system of claim 1 wherein the egress traffic manager comprises: decision maker module operable to determine whether to allocate the content provider's egress traffic differently among said plurality of service providers to achieve said optimal balance (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 10, Baldonado teaches the system of claim 1 wherein the egress traffic manager comprises: router interface utilization data collector module operable to collect interface utilization data reflecting traffic volume for each interface of at least one router that routes the content provider's egress traffic from the content

provider to the plurality of service providers (Paragraph 62, where the measurements are taken per SPAL and ISP);

per prefix utilization data collector module operable to collect per prefix utilization data reflecting traffic volume for each prefix to which the content provider's egress traffic is destined (Paragraph 85, where the second pass analyzes the performance of each prefix);

decision maker module operable to determine, based at least in part on the collected interface utilization data and the collected per prefix utilization data, whether a routing strategy of the at least one router should be updated to achieve the optimal balance (Paragraph 62, where the measurements are taken per SPAL and ISP); and

BGP speaker module operable to update the routing strategy of the at least one router if determined by the decision maker module that the routing strategy should be updated (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel and the update effects the router's next hop).

Regarding claim 11, Baldonado teaches the system of claim 1 wherein the communication network comprises the Internet (Paragraph 21).

Regarding claim 13, Baldonado teaches the method of claim 12 further comprising: if determined to change the allocation (Paragraph 52-58, which determines when to reconfigure the system), re-configuring at least one router that routes the egress traffic from the content provider to the service providers such that the egress traffic is allocated among the plurality of service providers in a desired manner

(Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel and the update effects the router's next hop).

Regarding claim 14, Baldonado teaches the method of claim 13 wherein said re-configuring comprises: updating a routing table of said at least one router (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel and the update effects the router's next hop).

Regarding claim 15, Baldonado teaches the method of claim 12 wherein said collecting traffic volume data comprises: collecting per prefix utilization data (Paragraph 85, where the second pass analyzes the performance of each prefix).

Regarding claim 16, Baldonado teaches the method of claim 15 wherein said per prefix utilization data comprises data corresponding to the amount of egress traffic for each of the plurality of service providers that is destined for a given prefix (Paragraph 85, where the second pass analyzes the performance of each prefix).

Regarding claim 17, Baldonado teaches the method of claim 12 wherein the content provider routes its egress traffic to said plurality of service providers via at least one router (Paragraph 18, where the content provider is the Routing Intelligence Unit; see *a/so* Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)).

Regarding claim 18, Baldonado teaches the method of claim 17 wherein said collecting traffic volume data comprises: collecting router interface utilization data (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 19, Baldonado teaches the method of claim 18 wherein the router interface utilization data comprises data corresponding to an amount of egress traffic from said content provider directed via each of a plurality of interfaces of said at least one router (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 20, Baldonado teaches the method of claim 19 wherein the plurality of interfaces are to the plurality of service providers (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 22, Baldonado teaches the egress traffic manager of claim 21 wherein said interface from the content provider to the plurality of service providers comprises an interface from at least one router to the plurality of service providers (Figure 1, elements 100 (content provider), 102 (a router), and 104 and 106 (ISPs)).

Regarding claim 23, Baldonado teaches the egress traffic manager 21 further comprising: means for capturing interface utilization data for each of said interface from the content provider to the plurality of service providers (Paragraph 62, where the measurements are taken per SPAL and ISP).

Regarding claim 24, Baldonado teaches the egress traffic manager of claim 23 wherein said means for determining further bases its determination of whether to reallocate said amount of outbound traffic on the captured interface utilization data

(Paragraph 62, where the measurements and route determinations are made in respect to each SPAL and ISP).

Regarding claim 26, Baldonado teaches the egress traffic manager of claim 25 wherein the at least one data collector module comprises: router interface utilization data collector module for collecting interface utilization data reflecting traffic volume for each interface of the at least one router that routes the content provider's egress traffic from the content provider to the plurality of service providers (Paragraph 62, where the measurements and route determinations are made in respect to each SPAL and ISP); and

per prefix utilization data collector module operable for collecting per prefix utilization data reflecting traffic volume for each prefix to which the content provider's egress traffic is destined (Paragraph 85, where the second pass analyzes the performance of each prefix).

Regarding claim 27, Baldonado teaches the egress traffic manager of claim 26 wherein the decision maker module determines, based at least in part on the collected interface utilization data and the collected per prefix utilization data, whether the routing strategy of the at least one router should be updated (Paragraph 96; 99-101, where the optimal route is determined based on both the ISP usage and the prefix performance).

Regarding claim 28, Baldonado teaches the egress traffic manager of claim 26 wherein the at least one router comprises a border gateway protocol (BGP) router, the egress traffic manager further comprising: a BGP speaker module for updating the routing strategy of the at least one router if determined by the decision maker module

that the routing strategy should be updated (Paragraph 36-37, where the Routing intelligence routers send update messages to the BGP routers about updates over the backchannel and the update effects the router's next hop).

Regarding claim 30, Baldonado teaches the method of claim 29 wherein said determining whether the volume of egress traffic from said at least one content provider router to any one of the plurality of service providers exceeds a corresponding threshold comprises: determining whether traffic volume on an interface from said at least one content provider router to one of the plurality of service providers exceeds said corresponding threshold (Paragraph 102-104).

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 7197040 issued to Bressoud, because it teaches selecting an optimal router through an ISP using a BGP router.

U. S. Patent Application Publication 2004/0073640 by Martin, because it teaches routing egress traffic through an ISP.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 9 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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KB
May 20, 2007